

# EXHIBIT

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## DEFENDANTS' MOTION TO EXCLUDE THE TESTIMONY OF DR. CHRISTOPHER TEAF

05-CV-0329 GKF-PJC

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IN THE UNITED STATES DISTRICT COURT FOR THE  
NORTHERN DISTRICT OF OKLAHOMA

W. A. DREW EDMONDSON, in his )  
capacity as ATTORNEY GENERAL )  
OF THE STATE OF OKLAHOMA and )  
OKLAHOMA SECRETARY OF THE )  
ENVIRONMENT C. MILES TOLBERT, )  
in his capacity as the )  
TRUSTEE FOR NATURAL RESOURCES )  
FOR THE STATE OF OKLAHOMA, )  
Plaintiff, )  
vs. ) 4:05-CV-00329-TCK-SAJ  
TYSON FOODS, INC., et al, )  
Defendants. )

- - - - -  
VOLUME I OF THE VIDEOTAPED  
DEPOSITION OF CHRISTOPHER TEAF, PhD, produced  
as a witness on behalf of the Defendants in the  
above styled and numbered cause, taken on the 30th  
day of July, 2008, in the City of Tulsa, County of  
Tulsa, State of Oklahoma, before me, Lisa A.  
Steinmeyer, a Certified Shorthand Reporter, duly  
certified under and by virtue of the laws of the  
State of Oklahoma.

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**918-587-2878**

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I N D E X

W I T N E S S	P A G E
CHRISTOPHER TEAF, PhD	
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1 culture up.

2 Q Okay, but is it true that the State of  
3 Oklahoma in this case and those working for the  
4 State in this case utilized the most reliable  
5 methods available in laboratory work to test samples 09:43AM  
6 for Salmonella?

7 A I don't know that. They tested by appropriate  
8 methods as they believed them to be at that time,  
9 but in retrospect, my understanding is there are  
10 specific methods that are different if you're 09:43AM  
11 looking for a particular species. These were done  
12 the way they were done in part because that was what  
13 was being conducted by the State, but those are  
14 consensus reliable methods for general  
15 microbiological growth. They are not targeted for 09:43AM  
16 specific individual species to my knowledge.

17 Q Would you agree with me that in terms of  
18 chicken litter, that the pathogens of concern are  
19 Salmonella and Campylobacter?

20 A No. 09:44AM

21 Q Are there any others?

22 A I would say E. coli, the coliforms as  
23 indicators, the Enterococci, fecal strep.

24 Q My question is pathogens, not indicator.

25 A Okay. The fecal Streptococci, the Enterococci 09:44AM

1 are pathogens as well.

2 Q Enterococci are pathogens?

3 A Yes.

4 Q They will cause disease processes in human  
5 beings?

09:44AM

6 A Yes. Staphylococcus is another and, you know,  
7 I know you don't have an interest in knowing about  
8 coliforms, but they have a value.

9 Q Well, I do have an interest. I have an  
10 interest in everything. I've got a wide range --

09:44AM

11 A I mean for this question you don't.

12 Q I have a wide range of interests.

13 A Okay.

14 Q Let's get back to the questions, though. Let  
15 me try to be as precise as possible. In terms of  
16 potential pathogenic bacteria that's contained in  
17 chicken litter, are we talking about anything other  
18 than Salmonella and Campylobacter?

09:44AM

19 A Yes, we are.

20 Q Okay. Tell me what in addition to those two  
21 that we're talking about.

09:45AM

22 A E. coli, fecal Streptococci, which are in many  
23 instances synonymous with the Enterococci, and  
24 Staphylococcus, and the other pathogens are not  
25 identified specifically because they're not tested

09:45AM

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1 DuPont's testimony has been regarding the issue of  
2 0157 in chickens?

3 A I don't.

4 Q Pardon me?

5 A I don't. 09:47AM

6 Q You don't. Now, what about Campylobacter in  
7 surface water and groundwater; how many samples of  
8 surface water were tested for Campylobacter?

9 A A fair number. I couldn't tell you the  
10 number. 09:47AM

11 Q And how many tested positive for Campylobacter  
12 surface water?

13 A Early on a lot of the samples were tested for  
14 it. Subsequently because we didn't identify it,  
15 less of them were tested. This became an issue 09:47AM  
16 later on, and we had subsequent discussions about  
17 why that was, and I believe that the understanding  
18 is that the methods that were being used to assess  
19 Campylobacter probably were not sufficient to find  
20 it had it been present, but it was not found. 09:48AM

21 Q Either in surface or groundwater?

22 A I'm not aware that it was, no.

23 Q Now, what would be the method, the more  
24 sophisticated method to test for Campylobacter that  
25 the State of Oklahoma did not use if there is one? 09:48AM

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1       **A**       I'm not familiar with that. You'd have to  
2       check with Dr. Harwood or one of the  
3       microbiologists, but the issue is not so much the  
4       testing method as the fact that Campylobacter has a  
5       characteristic of its growth, in which it achieves a       09:48AM  
6       state of what's called viable and non-culturable,  
7       that is, it's still infective, it's still alive, but  
8       it's difficult to culture.

9       **Q**       But it can be?

10      **A**       Once again, I understand that it can be, but       09:48AM  
11      it's often not and that's the reason why it's often  
12      not found.

13      **Q**       Are you aware that the Attorney General has  
14      contended that he's spent 17 million dollars so far  
15      in expert work in this case?       09:49AM

16      **A**       I don't know what that number is.

17      **Q**       Truth of the matter is that at least in  
18      January of 2006, two and a half years ago, in  
19      accordance with this memorandum, the State of  
20      Oklahoma consciously set out on a course of trying       09:49AM  
21      to identify Salmonella and Campylobacter in the  
22      waters of the IRW; correct?

23      **A**       It was included in our questions, yes.

24      **Q**       Now, the last part of that Paragraph 3 says,  
25      quote, the uncertainty regarding association of       09:49AM

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1 an interesting question.

2 Q Is that why you wrote it down?

3 A I didn't write that down. I wrote off  
4 something else. If you care to look, you are  
5 certainly welcome to. 01:12PM

6 Q No, I don't do that.

7 A Oh.

8 MR. McDANIEL: Somebody else might.

9 A And they would be welcome as well.

10 Q Okay. Let me sure I got this straight. To 01:12PM  
11 your knowledge, nobody on the State of Oklahoma's  
12 team in this case has attempted to measure how far  
13 upstream from the Oklahoma State line bacteria would  
14 still have an impact at the state line; true?

15 A I believe that's true. 01:13PM

16 Q Okay. Have you attempted to evaluate how far  
17 downstream from litter application fields bacteria  
18 that may have been in that litter would remain  
19 viable?

20 A I don't believe that's been done for any 01:13PM  
21 individual application, no.

22 Q Has it been done at all?

23 A Well, the microbial source tracking and the  
24 principal component analysis done by Dr. Olsen and  
25 Dr. Harwood have indicated that it's clear that many 01:13PM



1 of these sources of bacteria and other components  
2 come from poultry, but they can't identify, at least  
3 have not to this point, have not identified any  
4 particular field and distance from that field that  
5 they may have gone. I think that's the question 01:14PM  
6 that you asked.

7 Q And neither one of those methodologies are  
8 being utilized for quantification purposes, are  
9 they?

10 MR. PAGE: Object to the form. 01:14PM

11 A Not by me. I can't speak to anybody else. I  
12 can't speak for anyone else.

13 Q So it would be true that to your knowledge  
14 nobody on the State of Oklahoma's team in this case  
15 would be able to identify any particular bacteria 01:14PM  
16 that might be in the Illinois River or Lake  
17 Tenkiller back to a Simmons farm or to a Tyson farm  
18 or to a George's farm?

19 MR. PAGE: Object to the form.

20 Q Or a farm that is owned by any of our contract 01:15PM  
21 growers?

22 MR. PAGE: Object to the form.

23 A A particular bacterium?

24 Q Yes.

25 A I would say that probably no one has ever done 01:15PM

1 Q Concede to what really happened in 2003.

2 MR. PAGE: Object to the form.

3 A No. I think we would have a discussion about

4 it. I wouldn't -- I would like to hear his

5 explanation, and he would probably be interested in 01:28PM

6 hearing mine. It would be interesting if the

7 explanation was that was all budget because that's

8 something we discussed at length earlier this

9 morning about cost and technical feasibility.

10 Q Would it surprise you to know that the report 01:28PM

11 prepared by a panel of experts which EPA convened in

12 2007, which is relied on in your report; correct?

13 A Yes.

14 Q Stated that it is widely believed that human

15 feces pose a larger health risk than animal feces to 01:28PM

16 swimmers and other primary contact recreational

17 water users?

18 MR. PAGE: Object to the form.

19 A I think with no other qualifiers, that's

20 probably an accurate statement. There are, of 01:28PM

21 course, other qualifiers.

22 Q And would you agree that that belief derives

23 from the basic concept that virtually all enteric

24 pathogens of humans are infections to other humans,

25 while relatively few of the enteric pathogens of 01:29PM

1 animals are infectious to humans?

2 A I think comparatively few are, but I don't  
3 think that that means there's an insignificant  
4 number, no.

5 Q Can you -- in Paragraph 21, can you show us 01:29PM  
6 any article or any source material at all that shows  
7 that -- that states that fecal coliform is a  
8 reliable indicator of pathogenic bacteria?

9 A Yeah. I mean look at the first to the fourth  
10 lines on Page 10 citing Wade 2006. I believe that 01:30PM  
11 discussion is also encompassed in other ways in EPA  
12 2003 and WHO 2000.

13 Q So it's your testimony if we look at Wade  
14 2006, we'll find a statement in there where he says  
15 that E. coli is a reliable indicator of pathogenic 01:30PM  
16 bacteria; is that your testimony?

17 A One or all three of those are, yes, sir.

18 Q Would you bet the outcome of this lawsuit on  
19 that?

20 A Well, I'm not sure if you meant to, but you 01:30PM  
21 asked me two different questions. The first time  
22 you asked me about fecal coliform and the second  
23 time you asked me about E. coli, and I don't -- and  
24 I think my answer was correct.

25 Q Are you aware that in 2003 Wade found no 01:30PM

1 understand that claims are being made with respect  
2 to bacteria and some of the other issues, and my  
3 question is, in order for these county data  
4 regarding Salmonella or Campylobacter, Giardia, the  
5 various things that you've mentioned, in order to be 03:20PM  
6 relevant to the issues of this lawsuit, wouldn't  
7 they need to be from a waterborne source?

8 **A** I think they would have to be associated with  
9 the water pathway, but it could be -- and I don't --  
10 I'm not trying to expand this beyond your question, 03:21PM  
11 but it could be sediment; it could be soil at the  
12 banks of a stream.

13 **Q** I understand, but it's not foodborne?

14 **A** I would say not.

15 **Q** Okay, and the truth is, is that you don't 03:21PM  
16 know, none of us know whether the cases of  
17 Salmonella or Campylobacter, E. coli, Giardia or any  
18 of the rest of them, we don't know whether these  
19 county data are based on foodborne sources or  
20 waterborne sources; correct? 03:21PM

21 **A** It's true in most instances that's not  
22 sufficiently well known to determine the exact  
23 cause. In fact, in most of them probably.

24 **Q** Well, you said generally. I mean do you know  
25 on any of these cases, whether it be in Adair County 03:21PM

1 or any other counties in the IRW, do you know  
2 whether any of those cases that have reported  
3 bacterial illness were foodborne or waterborne?

4 A I don't, and part of the reason for that is  
5 what I mentioned earlier, which is due to 03:22PM  
6 confidentiality issues, I can't get the information  
7 on individual cases.

8 Q Excuse me. I didn't mean to interrupt you. I  
9 wasn't being critical. I just want to make sure  
10 that I'm understanding you correctly. It's not your 03:22PM  
11 fault. It's just a reality that you have not been  
12 able to gain access to the information to determine  
13 whether or not those various cases were waterborne  
14 or foodborne?

15 A If it's even known. If an individual reports 03:22PM  
16 it, do they know what caused it.

17 Q All right. You mentioned at the outset of the  
18 deposition that you had come here, I think you said,  
19 June, in June to talk with -- who did you talk to  
20 when you came here? 03:22PM

21 A I visited with Mr. Page and with Mr. Garren.

22 Q All right, and was that to finalize your  
23 report; was that the principal reason for your  
24 coming?

25 A No. My report had been submitted a number of 03:22PM

1 Q Are you the only shareholder? Is it a  
2 corporation?

3 A Yes, it is, and I am the only shareholder.

4 Q So they're salaried employees of yours in your  
5 company?

03:49PM

6 A Yes.

7 Q Is that right?

8 A Yes.

9 Q Okay. Have you ever written any peer-reviewed  
10 articles, books or chapters on, and then I'm going  
11 to go through some topics. I just want you to have  
12 it in mind. I'm trying to find out if you've

03:50PM

13 written any peer-reviewed articles, books or  
14 chapters, and then I'm going to go through a list of  
15 topics. First of all, on bacteria?

03:50PM

16 A Not specifically on bacteria but bacteria as  
17 site-related hazards.

18 Q Yeah. Let me be more specific because that  
19 probably is a difficult question for you to answer.

20 Let me rephrase it. Have you ever written any  
21 peer-reviewed articles, books or chapters where the  
22 primary focus was on bacteria?

03:50PM

23 A Only as a component of site risks. In many  
24 instances bacteria are a significant component of  
25 contaminated site risks. For example, military

03:50PM

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1 facilities, I've written several peer-reviewed  
2 articles on military facilities, which have as a  
3 component water treatment plants, sewage treatment  
4 plants and bacterial issues of water contamination.

5 It wasn't the only subject discussed, but it was a  
6 subject.

03:51PM

7 Q All right. So if I ask you the same question  
8 with respect to pathogenic bacteria, your answer  
9 would be the same?

10 A Yeah. I would not have made that distinction.  
11 I would have included pathogenic bacteria as the  
12 ones that would be of concern.

03:51PM

13 Q All right. Have you ever -- same question on  
14 specifically the pathogen Salmonella?

15 A No.

03:51PM

16 Q Specifically on the pathogen Campylobacter?

17 A No, I haven't.

18 Q Specifically on the pathogen E. coli?

19 A No, I've not.

20 Q When you said earlier that you had written  
21 some articles, and you cited some involving military  
22 installations, have you written any books or  
23 peer-reviewed materials or chapters where the  
24 primary focus was bacteria in water, surface water,  
25 groundwater?

03:51PM

03:52PM

1       **A**       That would have been the concern largely of  
2       those military installations would be water  
3       contamination.

4       **Q**       Okay. Can you give me a sense of or do your  
5       best for me on what publications those articles were       03:52PM  
6       published in?

7       **A**       I can identify them on my CV if you like.

8       **Q**       Well, I mean, if you need to look at your CV  
9       or if you know them off the top of your head,  
10      however you want to do that.       03:52PM

11      **A**       Well, two of them were for --

12      **Q**       If you need to look, go ahead. I'm not  
13      trying to keep you from looking.

14      **A**       -- NATO books.

15      **Q**       The word NATO would be in the name of the       03:52PM  
16      publication?

17      **A**       Yeah.

18      **Q**       That's all I needed. Have you ever written  
19      any peer-reviewed articles, chapters, books where  
20      the primary focus was bacteria in poultry or poultry       03:53PM  
21      litter?

22      **A**       No.

23      **Q**       Have you written any peer-reviewed articles or  
24      books or chapters on poultry or poultry litter? The  
25      question didn't have bacteria in it. The question       03:53PM



1 impact of nutrients on the eutrophication of water?

2 **A** No. It was -- those considerations, nutrients  
3 and other contaminants, were part of our chapter on  
4 groundwater issues. There were other chapters in  
5 the book that dealt more specifically with  
6 nutrients, but I was not an author of those  
7 chapters.

03:55PM

8 **Q** All right, and the chapters you wrote dealt  
9 with what?

10 **A** Industrial mining in military facilities and  
11 they're -- the fact that they are, in some  
12 instances, like little cities and so they have a  
13 variety of considerations, including chemical  
14 contamination, microbial contamination, nutrient  
15 contamination.

03:55PM

16 **Q** Okay.

17 **A** So as a component.

18 **Q** Did the chapter or chapters that you wrote  
19 deal with eutrophication of the water system or the  
20 waters?

03:55PM

21 **A** I don't believe it did, no.

22 **Q** Okay. Have you written any peer-reviewed  
23 articles, chapters, books on antibiotics?

24 **A** No.

25 **Q** How about antibiotic resistance?

03:55PM

1       **A**       No.

2       **Q**       How about indicator bacterias?

3       **A**       No.

4       **Q**       How about cyanobacteria?

5       **A**       No. 03:56PM

6       **Q**       Disinfection byproducts?

7       **A**       I have prepared and presented an invited  
8 presentation to the EPA, what is called fast track  
9 meetings, which were specifically focused on hazards  
10 and remediation strategies and management strategies 03:56PM  
11 for disinfectant byproducts in the latter part of  
12 2006.

13      **Q**       Is that identified in your CV?

14      **A**       Yes.

15      **Q**       And it was an invited presentation by EPA you 03:56PM  
16 say?

17      **A**       Yes.

18      **Q**       By a particular region or by US EPA?

19      **A**       It was out of the headquarters office. It was  
20 held in Clearwater I believe, Clearwater, Florida. 03:56PM

21      **Q**       Other than that presentation, have you written  
22 peer-reviewed articles or book chapters where the  
23 primary focus was disinfection byproducts?

24      **A**       Not the primary focus.

25      **Q**       Same question on -- in the field of geology? 03:57PM

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1       **A**       Or ways to evaluate those sites to determine  
2       what kind of cleanup might be necessary and if so,  
3       what criteria would you use to determine the cleanup  
4       was complete.

5       **Q**       All right. When you've spoken on the topic of                   04:02PM  
6       water quality, can you be more specific on what  
7       kinds of things you would be talking to the Florida  
8       legislature about?

9       **A**       I would say that it's occurred two or three  
10      times and in one instance, it was regulation of                   04:02PM  
11      hazardous wastes and the potential for contamination  
12      of groundwater and surface water.

13      **Q**       From what?

14      **A**       From hazardous waste disposal.

15      **Q**       From generically hazardous waste disposal?                   04:02PM

16      **A**       It was during the time in which hazardous  
17      waste regulations were being developed and the  
18      question of so who cares related to risks posed by  
19      improper disposal.

20      **Q**       Okay. Have you ever testified in court or in                   04:02PM  
21      a deposition where the primary focus of the  
22      deposition was -- as it is in this case, bacteria?

23               MR. PAGE: Object to the form.

24      **A**       No. I have participated in public hearings  
25      involving groundwater -- or recycled or reused water                   04:03PM

1 in which bacteria and other aspects were at issue,  
2 but it was not a deposition. My recollection is it  
3 was not sworn testimony.

4 Q My question right now and a series of them are  
5 all going to just deal with depositions or court  
6 testimony. Would the same be true, that you've not  
7 testified in court or deposition on Salmonella,  
8 Campylobacter and E. coli?

04:03PM

9 A That's true.

10 Q Have you ever testified before on the effect  
11 or impact of bacteria in water, surface water,  
12 groundwater?

04:03PM

13 A No.

14 Q How about bacteria in poultry or poultry  
15 litter?

04:04PM

16 A No.

17 Q How about on the impact of nutrients on  
18 eutrophication of water?

19 A No.

20 Q How about on antibiotics or antibiotic  
21 resistance?

04:04PM

22 A No.

23 Q Cyanobacteria?

24 A No.

25 Q Have you ever testified in a case where it was

04:04PM

1 significant -- you know, where bacterial indicator  
2 or indicator bacteria was a significant component of  
3 the case?

4 **A** No.

5 **Q** Have you ever testified in court or in 04:04PM  
6 deposition about disinfection byproducts?

7 **A** I don't believe so in their production during  
8 water treatment, but many of those same chemicals  
9 are substances about which I've testified in  
10 contaminated site cases, chloroform, chlorinated 04:05PM  
11 solvent, degradation products, but not water  
12 treatment facilities per se.

13 **Q** So you've testified in cases that involved the  
14 clean-up of a facility in which --

15 **A** Those chemicals were present.

16 **Q** -- those disinfection byproducts were part of  
17 the problem?

18 **A** Right, and they may have come from water  
19 treatment facilities or they may have come from  
20 other industrial operations, but it was the same 04:05PM  
21 substances.

22 **Q** Do you remember the names of those cases or  
23 are you thinking about a specific case?

24 **A** I'm not thinking about a specific case, but  
25 I'm certain that I have. 04:05PM

1 Q Have you ever done any -- do you consider  
2 yourself an expert on the topic of bacteria in  
3 poultry or poultry litter?

4 A As a result of my activities in this case, I  
5 feel like I do have that knowledge, yes. 04:09PM

6 Q Did you have it before you started this case?

7 A No, I would say not.

8 Q Do you consider yourself an expert on the  
9 impact of nutrients in water?

10 A Less so, no, probably not. 04:09PM

11 Q Do you consider yourself an expert on  
12 antibiotics and antibiotic resistance?

13 A I'm very familiar with the area, but it's not  
14 an area that I have conducted specifically research  
15 in myself. 04:10PM

16 Q Do you consider yourself an expert in the area  
17 of cyanobacteria?

18 A Again, from a public health perspective and  
19 the work I've done with the World Health  
20 Organization, yes. Am I -- the biology of the 04:10PM  
21 cyanobacteria is not my area of research.

22 Q I take it you don't consider yourself an  
23 expert in geology or agriculture or the practice of  
24 medicine?

25 A No, sir, not in the way you define it, 04:10PM

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SIGNATURE PAGE

I, Christopher Teaf, PhD, do hereby  
certify that the foregoing deposition was presented  
to me by Lisa A. Steinmeyer as a true and correct  
transcript of the proceedings in the above styled  
and numbered cause, and I now sign the same as true  
and correct.

WITNESS my hand this \_\_\_\_\_ day of  
\_\_\_\_\_, 2008.

\_\_\_\_\_  
CHRISTOPHER TEAF, PhD

SUBSCRIBED AND SWORN TO before me this  
\_\_\_\_\_ day of \_\_\_\_\_, 2008.

\_\_\_\_\_  
Notary Public

My Commission Expires:  
\_\_\_\_\_

05:48PM

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## C E R T I F I C A T E

STATE OF OKLAHOMA       )  
  )    ss.  
COUNTY OF TULSA       )

I, Lisa A. Steinmeyer, Certified  
Shorthand Reporter within and for Tulsa County,  
State of Oklahoma, do hereby certify that the above  
named witness was by me first duly sworn to testify  
the truth, the whole truth and nothing but the truth  
in the case aforesaid, and that I reported in  
stenograph his deposition; that my stenograph notes  
were thereafter transcribed and reduced to  
typewritten form under my supervision, as the same  
appears herein.

I further certify that the foregoing 251  
pages contain a full, true and correct transcript of  
the deposition taken at such time and place.

I further certify that I am not attorney  
for or relative to either of said parties, or  
otherwise interested in the event of said action.

WITNESS MY HAND AND SEAL this 31st day  
of August, 2008.

---

LISA A. STEINMEYER, CRR  
CSR No. 386

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918-587-2878**



1                   IN THE UNITED STATES DISTRICT COURT FOR THE  
2                   NORTHERN DISTRICT OF OKLAHOMA  
3  
4

5       W. A. DREW EDMONDSON, in his )  
6       capacity as ATTORNEY GENERAL )  
7       OF THE STATE OF OKLAHOMA and )  
8       OKLAHOMA SECRETARY OF THE )  
9       ENVIRONMENT C. MILES TOLBERT, )  
10      in his capacity as the )  
11      TRUSTEE FOR NATURAL RESOURCES )  
12      FOR THE STATE OF OKLAHOMA, )  
13   )

14                   Plaintiff, )  
15   )

16       vs. )

17       TYSON FOODS, INC., et al, )  
18   )  
19       Defendants. )

20   )4:05-CV-00329-TCK-SAJ  
21   )  
22   )  
23   )  
24   )  
25   )

1       - - - - -  
2                   VOLUME II OF THE VIDEOTAPED  
3       DEPOSITION OF CHRISTOPHER TEAF, PhD, produced  
4       as a witness on behalf of the Defendants in the  
5       above styled and numbered cause, taken on the 31st  
6       day of July, 2008, in the City of Tulsa, County of  
7       Tulsa, State of Oklahoma, before me, Lisa A.  
8       Steinmeyer, a Certified Shorthand Reporter, duly  
9       certified under and by virtue of the laws of the  
10      State of Oklahoma.  
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I N D E X

W I T N E S S

P A G E

CHRISTOPHER TEAF, PhD

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1 of field samples, which is again the context of this  
2 sentence, I'm looking at what's available in the  
3 literature that defines water sample values that are  
4 associated with losses of raw sewage.

5 Q Do you know of any evidence that would 10:50AM  
6 indicate that raw untreated sewage as you define it  
7 here, 10 to the fifth power, was entering the  
8 Illinois River from any edge of field?

9 A That's not what this says.

10 Q I understand. I'm asking you, are you aware 10:51AM  
11 of any evidence of that in this case?

12 A Of raw sewage?

13 Q Yes, entering the Illinois River from an edge  
14 of field.

15 A The edge of field samples are for samples at 10:51AM  
16 which poultry litter had been applied, not raw  
17 sewage. My comparison is with numerical values.

18 Q Right, I understand. What I'm asking you is,  
19 do you have -- is there any evidence that those  
20 numerical values, 10 to the fifth power, of these 10:51AM  
21 bacterial colony counts were actually entering the  
22 Illinois River from any of these fields at that  
23 level?

24 A I don't -- I don't think that was asked. What  
25 was asked was if you look at the edge of field 10:52AM

1 samples which are collected in swales or water  
2 collection ditches next to the fields, what are the  
3 numbers and what is the significance of those  
4 numbers, what can you compare them to.

5 Q And I understood that. I understand that 10:52AM  
6 perfectly I think, not perfectly, but I generally  
7 get it. What I'm trying to find out is -- I'm  
8 trying to take you beyond what you've written here  
9 and I'm trying to understand, is there any evidence  
10 in this case that you're aware of that sewage or 10:52AM  
11 bacterial colony counts of 10 to the fifth power  
12 actually ran off the poultry fields into the  
13 Illinois River?

14 A Well, we know they ran off the poultry fields  
15 into the edge of field conveyances, if you will, 10:52AM  
16 that were connected to the Illinois River. I don't  
17 know that there's data that follows that step  
18 downward.

19 Q That's what I'm asking.

20 A It looks at the Illinois River, looks at the 10:53AM  
21 edge of field, looks at the soil samples in the  
22 field. That's the connection.

23 Q Okay. You don't have any knowledge of anybody  
24 actually taking a sample from water running off of  
25 the field into the water or the sample measured this 10:53AM

1 BY MR. McDANIEL:

2 Q Dr. Teaf, I'm Scott McDaniel. My client is  
3 Peterson Farms in this matter. I'm going to start  
4 with Table T3 of your report.

5 A Yes. 12:39PM

6 Q Explain to me how to read this table, please.

7 A Table T3 is identified as  
8 trihalomethane-forming potential. It is for a  
9 period of time over which data were collected from  
10 May of 2005 to August of 2007 for five of the water 12:40PM  
11 authorities that draw water from the Illinois River  
12 watershed, identifies the average concentration of  
13 THM-forming potential and the range of values that  
14 were identified by CH2 or, excuse me, CDM personnel  
15 that sampled water in the vicinity of the raw water 12:40PM  
16 intakes for those facilities.

17 Q Okay. What -- it says average THMFP reported  
18 as CHCL3 micrograms per liter?

19 A Yes.

20 Q All right. Tell me what CHCL3 micrograms per 12:41PM  
21 liter mean.

22 A CHCL3, chloroform, and THM-forming potential  
23 typically is expressed normalized to chloroform by  
24 molecular weight. The trihalomethanes, there are  
25 four of them, and they have different molecular 12:41PM

1 analysis; I gather you are relying on the work of  
2 those individuals for that conclusion?

3 A I'm relying upon them for that basis, but I  
4 find it to be a reasonable conclusion.

5 Q Well, you read it and agree with it. That's 12:57PM  
6 not the same thing as if you conducted the  
7 investigation yourself; you agree with that; right?

8 A Yes, I agree with that. I did not.

9 Q Let's look at your Table T1, please. Do you  
10 have it there? 12:58PM

11 A Yes.

12 Q I want to go through the columns and clear up  
13 a few things for me. I know you've testified about  
14 this extensively yesterday and I'm trying not to  
15 plow the same ground. Under chloroform, there are 12:58PM  
16 two columns. There's the MCLG of 70 micrograms per  
17 liter; right?

18 A Yes.

19 Q Excuse me. Is that a regulatory limit?

20 A For chloroform? 12:58PM

21 Q Yes, sir.

22 A Yes.

23 Q It's a regulatory limit that cannot be  
24 exceeded in treated water?

25 A The MCLG and the MCL in the case of chloroform 12:58PM

SIGNATURE PAGE

I, Christopher Teaf, PhD, do hereby  
certify that the foregoing deposition was presented  
to me by Lisa A. Steinmeyer as a true and correct  
transcript of the proceedings in the above styled  
and numbered cause, and I now sign the same as true  
and correct.

WITNESS my hand this \_\_\_\_\_ day of  
\_\_\_\_\_, 2008.

\_\_\_\_\_  
CHRISTOPHER TEAF, PhD

SUBSCRIBED AND SWORN TO before me this  
\_\_\_\_\_ day of \_\_\_\_\_, 2008.

\_\_\_\_\_  
Notary Public

My Commission Expires:  
\_\_\_\_\_

03:35PM

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## C E R T I F I C A T E

STATE OF OKLAHOMA       )  
  )    ss.  
COUNTY OF TULSA       )

I, Lisa A. Steinmeyer, Certified  
Shorthand Reporter within and for Tulsa County,  
State of Oklahoma, do hereby certify that the above  
named witness was by me first duly sworn to testify  
the truth, the whole truth and nothing but the truth  
in the case aforesaid, and that I reported in  
stenograph his deposition; that my stenograph notes  
were thereafter transcribed and reduced to  
typewritten form under my supervision, as the same  
appears herein.

I further certify that the foregoing 242  
pages contain a full, true and correct transcript of  
the deposition taken at such time and place.

I further certify that I am not attorney  
for or relative to either of said parties, or  
otherwise interested in the event of said action.

WITNESS MY HAND AND SEAL this 1st day of  
September, 2008.

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LISA A. STEINMEYER, CRR  
CSR No. 386

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